BCSA – Surface Water Peer Review
Follow-up Responses to the August 4, 2016 Teleconference

1. Please provide slides for Comment No. 1.

The slides were provided to Doug Tomchuk in an email sent by Peter Brussock on August 7, 2016.

2. Please provide Applied Optics reference discussed in Comment 2.

W. H. Slade and E. Boss (2015) Spectral attenuation and backscattering as indicators of average particle size, Appl. Opt., 54(24), 7264-7277. (Copy attached)

3. Please provide the Total Absorption data (at 20 cm above the bed) discussed in Comment 2.

The spectral absorption data obtained in summer 2011 by a WET Labs, Inc. ac-s in near-bed environments (within 0.2 m of the sediment bed) at Walden Swamp and Upper Berry's Creek monitoring locations indicated that a_{pg} at red to near-infrared wavelengths averaged approximately 1 m^{-1}. An absorption coefficient (particulate plus dissolved) of 1 m^{-1} results in a 1% correction for the backscattering coefficient, where:

$$K(\lambda) = \exp[L\ a_{pg}(\lambda)]$$

and L is the ECO-bb pathlength (centered at 1 cm). However, this value is expected to decrease further away from the bed, where optical monitoring measurements were collected. This value is expected to decrease further in main channel monitoring locations, particularly at Middle Berry's Creek, where conditions are less turbid, resulting in $\boldsymbol{K << 1\%}$.

It is worth noting again that the output from the ECO-bb sensors (the backscattering coefficient at 660 nm) was used as one of many inputs to multi-variable statistical regression analysis. The values themselves were not used for direct comparison or direct analysis leading to conclusions regarding the site.

4. Please provide Chemometrics reference discussed in Comment 11.

S. de Jong (1993) SIMPLS: An alternative approach to partial least squares regression, Chemometrics and Intelligent Laboratory Systems, 18, 251-263. (Copy attached)

5. Please provide clarification on POC versus POM in Comment 14.

The variable termed, "POC" in the RI report refers to laboratory analysis of discrete samples for volatile solids. The method used was SM2540G. A copy of the laboratory analytical method is attached.